# 10-Year Water Supply Facility Workplans and Regional Water Supply Plans

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# WMDs: Linking Water and Land Use Planning

- New SB 1906 Legislative Requirements Local government comprehensive plans must:
  - Be coordinated with WMD regional water supply plans (potable water; conservation; intergovernmental coordination)
  - By January 1, 2005 or the Evaluation and Appraisal Report (EAR) due date, whichever occurs first, contain a new 10 year water supply facilities work plan
  - Use the EAR process to consider WMD regional water supply plans

### Water Supply Planning: 1997 Amendments

- WMDs to perform water supply assessments to identify 20-year water sources
- WMDs to develop regional water supply plans for the regions that do not have sufficient sources
  - Plans were completed 2000; next update by 2005
  - Plans provide a road map for meeting future needs, including water resource and water supply development options and cost estimates
  - Plans are also to "sustain the water resources and related natural systems"

## What is a Water Supply Plan?

- Proactive approach to sustain future water resources for supply and natural resources
- Addresses demands and resource protection
- Strategies & costs to meet future demands

### It is not:

- A master consumptive use permit (CUP), but it may be best available data
- A concurrency tool, but it does provide a toolbox of water supply source options

### Conceptual Relationship Among the Harm, Serious Harm and Significant Harm Standards

Water Level **Decreasing** 

**Drought** Severity Increasing

**Permittable Water NO HARM NO HARM Environmental** 1 -in- 10 Year Level **HARM Phase I Water Restrictions** Restoration of Certainty HARM Temporary harm to the water resource, **Phase II Water Restrictions** recovery will occur within 1 or 2 seasons Minimum Flows and Levels SIGNIFICANT HARM SIGNIFICANT Harm that requires Phase III Water Restrictions **HARM** multiple years for the water resource to recover **SERIOUS HARM** Permanent or **SERIOUS Phase IV Water Restrictions** irreversible **HARM** damage to the water resource

### **OBSERVED IMPACTS**

# Water Supply Plan Requirements Ch. 373 F.S.

- Minimum 20 year Planning Period
- 1-in-10 Level of Certainty
- Water Resource Development (WMD)
  - schedules, costs; (e.g. Everglades restoration)
- Water Supply Development (Local Gov.)
  - options, est. cost; (e.g. new wellfield; pipes)
- Minimum Flows and Levels (MFL)
  - recovery and prevention strategies
- Five Year Updates

# Water Supply Planning Update Schedules

| Districts | Regional Water<br>Supply Plans       |
|-----------|--------------------------------------|
| NWFWMD    | October 2005                         |
| SJRWMD    | April 2005                           |
| SRWMD     | 2005 *                               |
| SWFWMD    | Dec. 2005                            |
| SFWMD     | June 2004 (UEC) -<br>Dec. 2005 (LEC) |

<sup>\*</sup> if necessary

## Water Supply Development Component

- The water supply development component shall include:
  - Assessment of water supply needs to be met in a 1-in-10 year drought event
  - List of traditional & alternative water source options for utilities which exceed future needs
  - Estimated water available from each source
  - Costs and potential funding source for water supply development
  - List of water supply development projects which could be considered for state or WMD funding

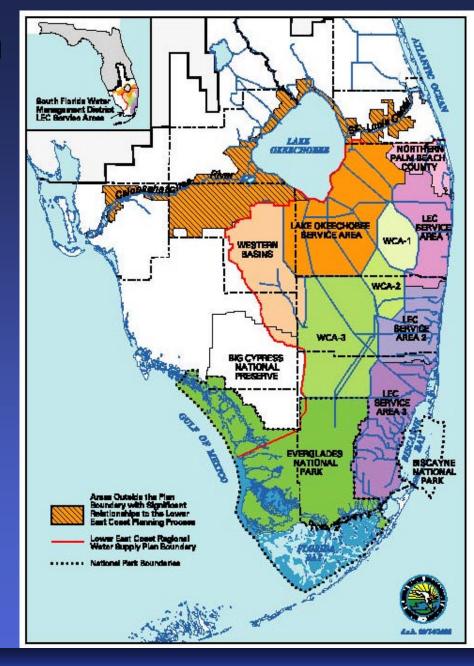
## **LEC Planning Region**

### **Study area contains:**

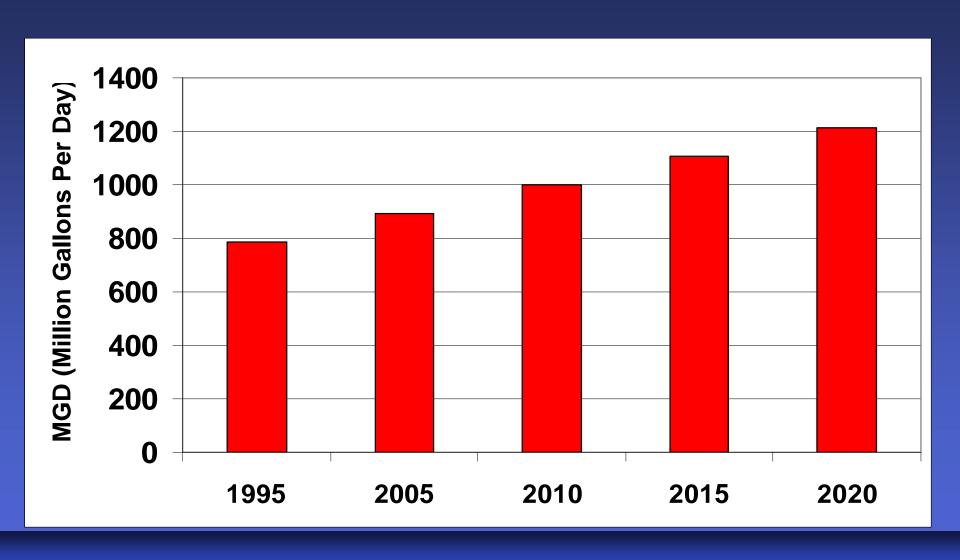
- ~ 9,000 sq. mi.
- 1995 population 4,756,000
- 2020 population 6,952,000

### Includes:

- Miami-Dade County
- Broward County
- Palm Beach County
- Most of Monroe County
- Parts of Lee, Collier, Hendry,Glades, Martin &Okeechobee counties

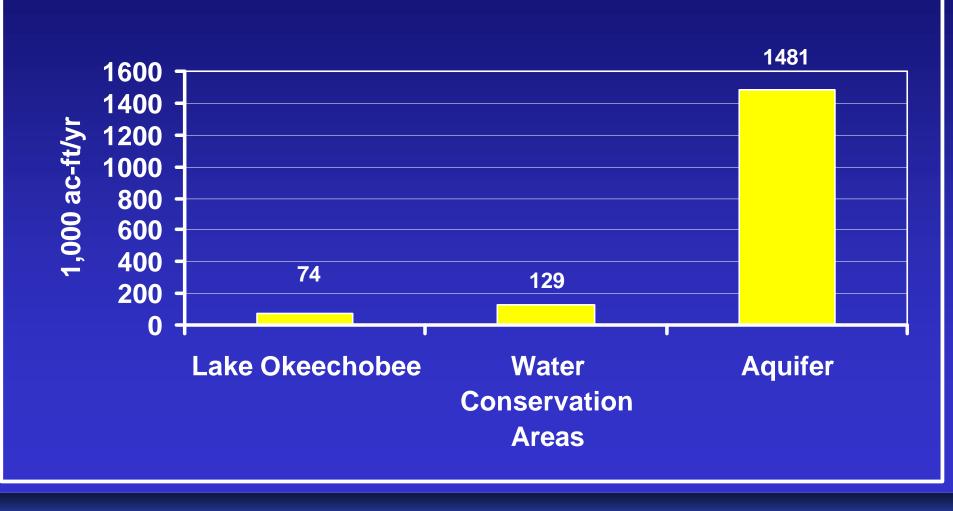


## LEC Public Water Supply Demands



# **Existing Sources of Water Supply for LEC Service Areas**

**Estimated Average Annual Delivery** 

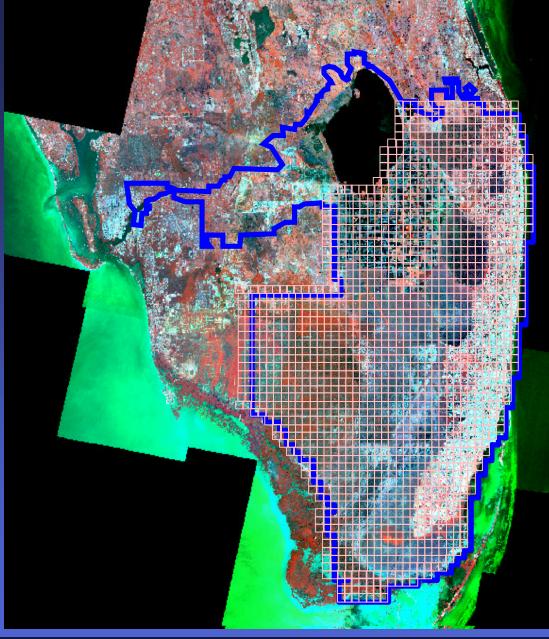


# Comprehensive Everglades Restoration Plan

- Aquifer Storage and Recovery V
- Surface Water Storage Reservoir
  - Stormwater Treatment Areas
    - Seepage Management ----
  - Removing Barriers to Sheetflow
    - Operational Changes -
      - Reuse Wastewater



# SFWMM Boundary and Grid





#### **Hydrologic Performance Measures** Indicator Regions Lake Okeechobee Stage Duration Curves File Edit View Go Communicator Help 50BSR AD13F 2010 2015 Netsite: http://www.sfwmd.gov/org/pld/proj/lec2020/index.html sfwmd.gov Lower East Coast Regional Water Supply Plan ➤ What's New About the Performance **Hydrologic Performance Measures** Base Case & Alternative Descriptions Lake Okeechobee ► Model Input Estuaries PWS Distribution -Other L.O. Service Area interactive program Everglades Ag. Area North Palm S. A. ► Planning Documents LEC Service Area 1 LEC Service Area 2 LEC Service Area 3 RELATED LINKS: WCA-1 (LNWR) WCA-2 ▶ Web-site Feedback WCA-3 ► Contact Information Everglades Nat. Park - SFWMD Boundary Areas outside of Plan boundary with signifi-cant relationship to the LEC 2020 Plan. who to contact • site map • search • webmaster • site design • home • email Use of information herein constitutes acceptance of our disclaimer Everglades Agricultural Area Document: Done Water Restrictions in LEC Mean Annual EAA/LOSA Supplemental Irrigation: Demands and Demands Not Met for the 1965 - 1995 Simulation Period Serv. Area MONTHS Run 44 95BSRR 33 19 2010R 21 21 14 2015R 2020R 14 005R 2010R CENT LOSA Area 95BSRR 38 21 38 12 2005R 44 44 14 20 15 27 2010R 19 12 2020R 2010R

# Implication of LEC Plan on consumptive uses

- Future limits on regional water
- Minimum Flows and Levels (MFLs) in the Everglades are not yet being met
  - Recovery plan limits regional water availability
- Reservations of water for the environment are required to be established for CERP under state law
- Uncertainties of water resource development technology and funding

Conservation

Wastewater Reuse

New Wellfields

**WATER SUPPLY** DEVELOPMENT **OPTIONS** 

Aquifer
Storage
& Recovery

Utility Interconnects

Surface Water Reservoirs

Floridan
Aquifer System

**Ocean Water** 

# "Federal & State Assurances: "Identify & Protect the Regional Water Supply"

CERP Water

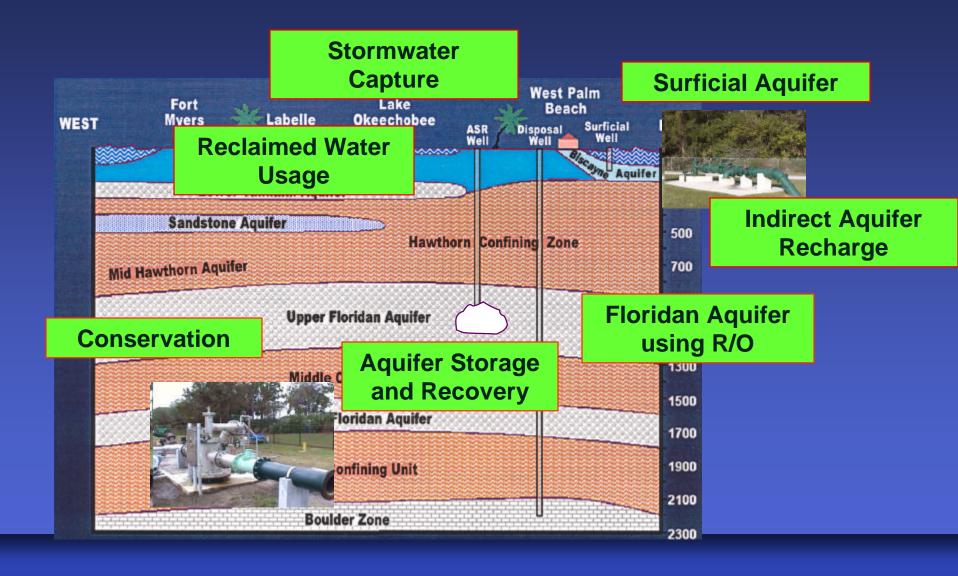
Existing Water

Water Made
Available for
Natural System

Water Made Available for Consumptive Use

Water for Natural System & Water Use

# Integrated Water Resource Management Strategies



# LEC Planning Document

- 1. Introduction
- 2. Water Supply Planning Process
- 3. Planning Area Description
- 4. Analysis and Evaluation of Model Results
- 5. Implementation Strategies and Basis for Recommendations
- 6. Recommendations

# **LEC Appendices Volume 1**

- A. Florida Statutes and Administrative Code
- B. Demand Estimates and Projections
- C. Description of CERP Components
- D. Performance Measures Used
- E. Regional Modeling
- F. Subregional Ground Water Models
- G. Engineering Design and Cost Estimates

## RWSPs & 10-year Workplans

- Group effort (local government planning department, local utility department, WMD, DCA)
- Major SFWMD Focus: Water Supply Coordination
  - 1. Future demand projections
  - 2. Future source identification
  - 3. Reuse, Conservation, per capita use

# Before you start preparing a Workplan

- Obtain & review the following (# 1 4 available at DCA or SFWMD web sites)
  - 1. DCA guidelines
  - 2. 10-year workplan Pilot Projects
  - 3. Interagency "White Paper"
  - 4. SFWMD Regional Water Supply Plan
  - 5. Local Utility Consumptive Use Permit
  - 6. Local Utility Capital Facility Plan

# **Drafting your Workplan**

- Inventory your current situation
- Project your future utility service area population and demands
- Identify water sources and facility improvements to meet future demands
- Identify revisions needed to comprehensive plan elements

### Scheduling to meet January 1, 2005 deadline

- August to October 2003
  - Decide who will do the work
- November 2003 to January 2004
  - Obtain & review DCA, SFWMD & Utility resources
- January 2004
  - Internal coordination & preparation (utility & planning)
- January to March 2004
  - **Coordination with SFWMD & DCA**
- April to June 2004
  - Amendments & hearings
- April to August 2004
  - DCA and agency review
- July to December 2004
  - Respond to ORC and adopt amendments

### **SFWMD Technical Assistance**

Web-based Assistance (www.sfwmd.gov)

- Plans currently available online:
  - Regional Water Supply Plans
  - District Water Management Plan
  - Other plans and technical information (CERP, SWIM, SOR)
- EAR & 10-Year Workplan web-page www. sfwmd.gov/org/wsd/ear/index.html

### **District Coordinator**

**Contact: Henry Bittaker** 

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### Visit our web site

Español sfwmd.gov south florida water management district the journey to restone America s Budget, Headquarters, History, FAQs EVERGLADIES Governing Board, Meetings, Inspector General, Agency Management Comprehensive Everglades Restoration Plan News Room, Publications, Diversity, Conservation Tips, Videos, Photos, >> WEB SITE Aguas Claras Recreation, Speakers Bureau En Espaffol Major Projects, Permitting, Kissimmee Rules & Statutes, Service Centers, Field Stations, Big Cypress Basin Lake Okeechobee Current Weather & Water Conditions, August 8, 2003 Technical Data, Emergency Management **Everglades** DISTRICT NEWS & MORE Career Opportunities District Names New Director for **Coastal Areas** Martin-St. Lucie Service Center... MORE → Procurement & Contracts NEW WEB SITE: Alternative Water **∼** Education Corner Supply & Water Conservation Activities... MORE NEWS: Water Reservations... MORE 🕨 NEWS: Answer your landscaping questions - download the new plant guide "WaterWise: South Florida Landscapes"... <u>MORE</u> THURSDAY OPERATIONS UPDATE ... MORE NEWS: Conserve Water: Turf Tips... MORE NEWS: Orange Co. Water Restrictions... MORE NEWS: Watch, or download the Governing Board meetings from earlier this month. See the "30-Day Archive" links on the left side of our "Meetings" page... MORE NEW WEB SITE: Evaluation & Appraisal Reports (EAR) Technical Assistance... MORE PUBLIC USE GUIDE: Save Our Rivers Lands... MORE NEWS: Water Use Rulemaking... MORE NEWS: Water Use Renewals... MORE FREE - SFWMD Screen Savers who to contact • site map • search • webmaster • site design

### New "EAR"/10-Year Workplan Website

### sfwmd\_gov

### Evaluation & Appraisal Reports (EARs)

The 2002 Legislature strengthened the coordination of water supply and land use planning. For the first time, a linkage was created in SB-1906 between water management district Regional Water Supply Plans and Local Government Comprehensive Plans. Local government must now develop and adopt 10-year Water Supply Facilities Workplans to address their future water supply needs, water supply sources and required facilities. They must also consider Regional Water Supply Plans as they prepare Evaluation & Appraisal Reports (EARs) assessing and updating their Local Government Comprehensive Plans.

The South Florida Water Management District (SFWMD) is working with the Florida Department of Community Affairs (DCA) to assist local government in this effort, both through regional workshops and individual local government technical assistance. This web page's purpose is to help provide local governments with access to the technical information they need to complete these land use planning efforts (i.e. EARs & 10-year workplans). Although a primary focus of the information below is water supply, links to other relevant SFWMD information addressing natural systems protection, flood control and water quality protection are also provided below.



#### Background

DCA 10-Year Workplan Guideline (PDF)

DCA's Water Supply Planning Webpage

Interagency Coordination
"White Paper"

EAR Process

DCA Sponsored Workshops

#### SFWMD's DCA Workshop Presentations

Introduction

Lower East Coast

Upper East Coast

Lower West Coast

<u>Kissimmee Basin</u>



Click on Photos to Enlarge

# Palm Beach County's 10-Year Workplan Pilot Project

- Future Demand Projections
  - Clear & concise demand calculations in 5-year increments; actually did 20-year workplan; population consistent with medium BEBR
- Future Sources
  - Future growth demands avoid regional system, uses AWS for supply; coupled with 20-year CUP
- Reuse (AWS)
  - Reuse doubles over 20 years, from 8 to 16 mgd